

What is claimed is:

1. A method for preventing endless transfer of a packet in a wireless LAN system, comprising the steps of:

when a packet is transferred, adding transfer history information to the
5 packet;

when a packet is received by an interconnecting device, judging,
based on transfer history information of the received packet, whether or not
the packet is a packet previously transferred by the interconnecting device;
and

10 transferring only a packet which is a kind of packet necessary to be
transferred and which is a packet not previously transferred by the
interconnecting device.

2. A method for preventing endless transfer of a packet in a wireless
15 LAN system according to claim 1, further comprising the step of:

in a case the received packet needs to be transferred and, in addition,
needs to be transmitted to a terminal under the control of the interconnecting
device, transmitting the packet to the terminal with the transfer history
information being removed from the packet when the packet is transmitted to
20 the terminal under the control of the interconnecting device.

3. A method for preventing endless transfer of a packet in a wireless
LAN system according to claim 2,

wherein the transfer history information includes device identifying
25 information of a device by which the packet is transferred.

4. A method for preventing endless transfer of a packet in a wireless
LAN system according to claim 3,

wherein the device identifying information is added in sequence after
30 device identifying information of a device performing immediately preceding
transfer.

5. A method for preventing endless transfer of a packet in a wireless

LAN system according to claim 4,
wherein the device identifying information is a MAC address.

6. A processing program for preventing endless transfer of a packet
5 executed in an interconnecting device which is provided in a wireless LAN
system, for performing packet interconnection, comprising:

a first step of judging whether or not the packet needs to be transferred
to a different interconnecting device when the packet is received;

10 a second step of judging whether or not the packet is a packet
previously transferred by the interconnecting device executing this processing,
in a case it is judged at said first step that the packet needs to be transferred to
the different interconnecting device; and

15 a third step of adding predetermined transfer history information to the
received packet to transfer the packet in a case it is judged at said second step
that the packet is a packet not previously transferred by the interconnecting
device.

7. A processing program for preventing endless transfer of a packet
according to claim 6, further comprising:

20 a fourth step of judging whether or not the received packet needs to be
transferred and, in addition, needs to be transmitted to a terminal under the
control of the interconnecting device; and

25 a fifth step of transmitting the packet with the transfer history
information being removed from the packet when transmitting the packet to
the terminal under the control of the interconnecting device, in a case when it
is judged at said fourth step that the received packet needs to be transferred
and, in addition, needs to be transmitted to the terminal under the control of
the interconnecting device.

30 8. A processing program for preventing endless transfer of a packet
according to claim 7,

wherein the transfer history information includes device identifying
information of a device by which the received packet is transferred.

9. A processing program for preventing endless transfer of a packet according to claim 8,

wherein the device identifying information is added in sequence after device identifying information of a device performing immediately preceding transfer.

10. A processing program for preventing endless transfer of a packet according to claim 9,

wherein the device identifying information is a MAC address.

11. A recording medium on which a processing program for preventing endless transfer of a packet executed in an interconnecting device which is provided in a wireless LAN system, for interconnecting the packet is recorded, the processing program comprising:

a first step of judging whether or not the packet needs to be transferred to a different interconnecting device when the packet is received;

a second step of judging whether or not the packet is a packet previously transferred by the interconnecting device executing this processing, in a case it is judged at the first step that the packet needs to be transferred to the different interconnecting device;

a third step of adding predetermined transfer history information to the received packet to transfer the packet in a case it is judged at the second step that the packet is a packet not previously transferred by the interconnecting device;

a fourth step of judging whether or not the received packet needs to be transferred and, in addition, needs to be transmitted to a terminal under the control of the interconnecting device; and

a fifth step of transmitting the packet with the transfer history information being removed from the packet when transmitting the packet to the terminal under the control of the interconnecting device, in a case when it is judged at the fourth step that the received packet needs to be transferred and, in addition, needs to be transmitted to the terminal under the control of the

interconnecting device.

12. A wireless interconnecting device which is provided in a wireless LAN system, for interconnecting a packet,

5 wherein, when a packet is transferred, transfer history information is added to the packet, and when a packet is received, the received packet is transferred only in a case the packet is judged, based on transfer history information of the packet, not to be a packet previously transferred by the wireless interconnecting device and necessary to be transferred.

10 13. A wireless interconnecting device according to claim 12,
wherein the received packet is transmitted with the transfer history information being removed from the packet when the packet is transmitted to a terminal under the control of the wireless interconnecting device.

15 14. A wireless LAN system comprising a wireless interconnecting device, in which a LAN backbone line wired with network devices is provided with wireless terminals enabled to exchange packets with wired side via said wireless interconnecting device,

20 wherein said wireless interconnecting device is the wireless interconnecting device according to claim 13.

25 15. A wireless LAN system according to claim 14,
wherein said wireless interconnecting device transmit the received packet with the transfer history information being removed from the packet when the packet is transmitted to a terminal under the control of the wireless interconnecting device.